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ABSTRACT

Summaries are provided of classroom research projects undertaken by Colorado teachers of students with learning disabilities. For each project, the document supplies the project title, researcher, school, problem statement, objective, population, assessment, procedures, evaluation, implications, and resources used. Project titles and researchers were as follows: "Auditory Discrimination Can Help Johnny To Spell" (Susan Denison); "Compared Effectiveness of Methods That Teach Language Development to Learning Disabled Students" (Holly Shaulis-Cunningham); "Early Intervention at the First-Grade Level" (Alys Wathen and Wendy Newman); "Incorporation of Outdoor Education as a Teaching Technique in the Learning Disabled Classroom" (Vicki Wattier); "Lifeskills for Stress and the Learning Disabled Student" (Linda French); "Using the Computer To Meet Specific Writing Needs of Learning Disabled Students" (Deborah Usrey); and "Whole Language versus Basal Reading Instruction for Learning Disabled Students" (Heidi Gesso). (JDD)

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Fourth Annual Report of Research Projects Conducted by Educators in Their Classrooms

Sponsored by
the Colorado Council for Learning Disabilities
and
the Special Education Services Unit
Colorado Department of Education

February 1991

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RESEARCH IN THE CLASSROOM

Fourth Annual Report of Research Projects
Conducted by Educators in Their Classrooms

Sponsored by
the Colorado Council for Learning Disabilities (CCLD)
and
the Special Education Services Unit
Colorado Department of Education

CCLD Research Committee

Gertrude Meyers
Nancy Dixon
Committee Chairpersons

Lois Adams
Susan Bechard
Dennis Hamann
Janet Kaye
Paula Pattschull
Pauline Stein
Donna Vaughters

February 1991

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INTRODUCTION

The Colorado Council for Learning Disabilities (CCLD) is proud to present the fourth annual report of *Research in the Classroom.*

The Classroom Teacher Research project was launched in 1987 by CCLD to encourage classroom teachers to conduct research as an important contribution to the improvement of teaching and to the knowledge of how children learn.

Interest on the part of Colorado teachers has steadily grown from a beginning of eight proposals received in 1987 to 26 proposals received in 1990. A total of 55 proposals have been submitted since the program began.

In 1989, two grants were awarded as a way of memorializing Colorado colleagues who have contributed much to education and especially to special education. They were in memory of Audrey Eiker and Jeanne Hughes. In 1990, the Audrey Eiker Memorial grant went to Linda French for her work on Life Skills for Stress and the Learning Disabled Student. In 1991, the Ellie Schmucker Memorial Fund is being established by Ellie's family and will be the source of a research grant each year.

Since CCLD has been designated as a tax-deductible organization, members can contribute tax-deductible funds to research grants ranging from $250 to $500. More funds will mean more grants to classroom teacher-researchers.

The material that follows summarizes the awarded proposals for 1989-1990 and results of the research. This compilation was written by the CCLD Research Committee.

These summaries may encourage more teachers to undertake classroom research. Examples of classroom teacher-researchers demonstrate methods used for research, the systematic approach to a question the teacher wanted to answer, and the value to both teachers and students for improving instruction through research in the classroom.

Gertrude Meyers

Nancy Dixon

Gertrude Meyers
Nancy Dixon
Committee Chairpersons

A recent article by Cochran-Smith and Lytle (1) states that few classroom teachers ever participate in objectively studying what they know about teaching. Yet, the article suggests teachers are the most likely persons to conduct research because they are in classrooms every day, they have the most experience with students, and they have a clear stake in improving classroom practice.

The fourth annual report of *Research in the Classroom* marks the continued efforts of Colorado teachers to systematically study what is happening in their classrooms. The Special Education Services Unit of the Colorado Department of Education is proud to co-sponsor this endeavor for the fourth year. We are committed to helping teachers analyze the effects of various instructional approaches for students who often have difficulty learning.

Congratulations to the teacher-researchers whose work is summarized in this report. Their efforts in documenting results of instructional practices serve as an example in problem solving, sharing and professional growth that helps us all.

Thanks to the Colorado Council for Learning Disabilities for its continuing support of the teacher research project. A special thank you to the Research Committee and Gertrude Meyers for their work in reading applications, determining recipients, and summarizing results.

We hope you will enjoy reading about the research projects undertaken this year and that you will gain a new idea or two to try with your students.

Kay Cessna
Senior Consultant

Lois Adams
Moderate Needs Project Coordinator

1. M. Cochran-Smith and S. Lytle. (1990) "Research on teaching and teacher research: The issues that divide." Educational Researcher 19, (2), 2-11.

Title: Auditory Discrimination Can Help Johnny to Spell

Researcher: Susan Denison

School: Bookcliff Middle School
Grand Junction, Colorado

Statement of the Problem: Students with learning disabilities lack skills in sound/symbol correspondence, leading to poor spelling skills.

Objective: To develop spelling skills of students with learning disabilities by stabilizing sight words and facilitate sound/symbol correspondence, through the use of manipulative activities.

Population: Nine students from the 6th-grade class were assigned to work with the Auditory Discrimination in Depth (ADD) kit. Of the nine students, five were identified as having learning disabilities; four students were included as having spelling difficulties, but not identified as having learning disabilities. Students worked four days per week, 20 minutes per period for three months on the program.

Assessment: The Test of Written Spelling (TWS-2) and writing samples were used as the pretest.

Procedures: Step 1. Parents were notified of the research project and permission was granted for students to participate in the project and for data to be published.

Step 2. The Auditory Discrimination in Depth kit was used. It contains colored blocks, letter tiles, colored felt squares and playing cards to be used in various activities. In the past, teachers had difficulty using the kit because instructions were not clear. The present publisher (DLM) now provides a videotape that describes how to use the kit. Students were instructed in activities during each period.

Step 3. Students were again evaluated at the end of the three months using the TWS-2 and collecting writing samples. Results are as follows:

Student	Increase in Predictable Words Spelled Correctly	Increase in Unpredictable Words Spelled Correctly
Ben	+21%	+13%
Randy	+ 6%	+11%
Lupe	+ 3%	- 1%
Jessica	+ 4%	+ 7%
Sherry	+36%	+28%
Angela	+12%	+28%
Veronica	+16%	+ 7%
Ben	+ 7%	+10%
Lincoln	+ 4%	+21%

Evaluation: The researcher grouped students according to age which seemed to be where they were most compatible. The youngest group was very comfortable working with tiles and blocks; the older group was sometimes uncomfortable using materials from the kit. The kit worked very well with students that were identified as having an attention deficit. However, students would be more acceptable to the kit if it was used during elementary school.

Implications: There is need for expansion of innovative ways to teach spelling. Community census indicates that business leaders are seeing poor spellers from all areas, not only special education students. The researcher feels that the ADD program provides assistance to students for developing a base of integrated sensory feedback on which later skills can be built. At the middle school level, other spelling activities (computer programs, experience-based spelling, basals, etc.) should be introduced. It is important to see what the carry-over will be for these nine students as 7th graders.

Resources:

Test of Written Spelling (TWS-2) Published by Pro Ed, 8700 Shoal Boulevard, Austin, TX 78758

Auditory Discrimination in Depth (ADD) kit. Published by DLM, 1 Delaward Park, Allen, TX 75002

Summarized by: Gertrude Meyers, CCLD Research Committee

Title: Compared Effectiveness of Methods that Teach Language Development to Learning Disabled Students

Researcher: Holly Shaulis-Cunningham

School: North Elementary School
Brighton, Colorado

Statement of the Problem: Students learn that which they do. When children are provided an experimental base upon which to learn new concepts and extend their vocabulary, they integrate new information more easily into their general fund of knowledge. This research was necessary in order to make a qualified statement in support of experimental strategies to teach language development to learning disabled students.

Objective: To determine the relative effectiveness of three instructional methods for vocabulary development with learning disabled students.

Population: Sixteen learning disabled students from 1st-5th grades.

Procedures: Students participated in various written and oral language lessons using individualized "word banks." The three sources of vocabulary were Experimental, Basal, and Standardized Word Lists. Methods included selecting vocabulary words from cooperative learning settings, choosing vocabulary words introduced during an anticipatory set for a basal story, and weekly additions of words from standardized lists (Dolch, Sucher-Allred) that students missed while orally reading to a teacher. The decision of which word to place in a student's individual word bank reflected both the teacher's and the student's choices for experimental and basal vocabulary.

In addition to the word banks, several activities occurred in the resource room involving this vocabulary, including alphabetizing, categorizing, parts of speech, sentence construction, creative writing, journals, phonics lessons, and dictionary work.

Evaluation: Data was collected from January to May 1990. Students were given file boxes with index cards; one card was used for recordkeeping. Whenever a child was able to successfully read ten words, a sticker was placed on the card along with the sources. An average of nine vocabulary words were added to the intermediate child's word bank weekly with less words given to primary students. As a control, equal numbers of words were selected from each of the three categories. Records were kept to track the number of words read and the number missed from each category. Also recorded were the words used with greatest accuracy and frequency, orally and in writing. Students were tested on their individualized sight words approximately every two weeks.

Findings: Findings of this research support experiential education as a method of teaching language development. Higher numbers of experiential vocabulary words were read, used approximately, and understood than words from the other two methods. The observation that students prefer to write using experiential vocabulary is likely because these words have more meaning to the children as they have been introduced via an activity. It is apparent that as educators we help provide children with connections between information we give them and their own experiences. Basal instruction is best when teachers can integrate specific activities into their reading lessons creating personal meaning for students. We should continue to have high expectations for learning disabled students' abilities to understand abstract concepts and to acquire difficult vocabulary, but also provide them an experiential foundation upon which those words take meaning.

Summarized by: Sue Bechard, CCLD Research Committee

Title: Early Intervention at the First-Grade Level

Researchers: Alys Wathen and Wendy Newman

School: Jewell Elementary School
Aurora, Colorado

Statement of the Problem: There is a need to provide early intervention at the 1st-grade level for "at-risk" students using a systematic, multi-sensory, remedial approach which involves whole language and phoneme segmentation.

Objective: To develop a curriculum for 1st-grade "at-risk" students which will:

1) alleviate further reading problems;
2) avoid student failure in 1st grade;
3) decrease inappropriate special education referrals;
4) increase regular education's awareness of possible interventions; and
5) separate students with true learning disabilities from students with developmental delays.

Population: Twelve "at-risk" 1st-grade students (10 percent of 1st-grade population).

Assessment: Assessment tools included teacher identification, reading group level, pre-reading observation sheet, Revised Slingerland Pre-Reading Screening Procedures, and the Test of Awareness of Language Segments (TALS).

Procedures: Remediation was implemented in weekly sessions of 45 minutes each. Two groups of 6 children were taught for 20 minutes each by a learning disabilities teacher and a speech pathologist. Intervention began with basic handwriting mechanics for developing proper letter formation and spacing. Consonant and vowel letters were written on one-inch cubes to be manipulated into forming CVC words developing phoneme awareness and enhancing pre-spelling skills. Finger spelling, sky writing and tactile letters were all utilized. In addition, Primary Phonic Workbooks and Story Books, Level I reinforced sound/symbol association and sound blending. Intervention included rhyming words, reading predictable books, level 1 and 2 Dolch Flash Cards, drawing and writing CVC words and encouraging invented spelling with emphasis on correct beginning and ending sounds.

Evaluation: The following tools were used to evaluate: TALS post test, teacher observations, student progress, number of promotions to 2nd grade, number of referrals to special education.

Findings: Fifty percent of the group were appropriate for special education referral. Seventy-five percent progressed from "not ready" or "approaching readiness" to "ready for basal." The remaining twenty-five percent made no progress. Most students who scored significantly low on the Slingerland Screening Test were referred for special education or retained in 1st grade.

Small group instruction produced active learning, alleviation of attention problems, immediate feedback to students and motivated learners. Kinesthetic, multi-sensory approaches were effective.

Through successful teaming, teachers were able to transfer current theories identified in research into practice in the classroom and to help regular educators learn new teaching techniques.

Researchers needed more time both in duration of treatment and time in the experimental settings to ensure mastery learning.

Further, additional definitive research must be undertaken to determine the most appropriate instruction for "at-risk" young students.

Summarized by: Pauline Stein, CCLD Research Committee

Title: Incorporation of Outdoor Education as a Teaching Technique in the Learning Disabled Classroom

Researcher: Vicki Wattier

School: Ruland Middle School
Gunnison, Colorado

Statement of the Problem: Efforts to mainstream learning disabled (LD) youngsters is a current trend. There is a need to develop avenues of positive interaction with regular education students to enhance self-esteem.

Objective: To effect a behavior change which will enable the student to return to the home school.

Population: Twelve students who attended the Alternative School in Gunnison were involved in this project.

Procedure: A pre-survey of self-esteem and decision-making was administered to students. The children were then taken on a field trip to participate in the Ropes Challenge Course for one day. This was presented as an incentive for students returning to their home school. A post-survey was not used because pre-survey results indicated students already had good self-esteem. Two small group counseling sessions were conducted. During the sessions students gave oral reports about their trip experience.

Findings: Students demonstrated positive social behaviors and learned to trust others. They learned that when a commitment is made, it needs to be acted upon. Parents and teachers seemed to attribute this improved attitude to the personal experience of students on the Ropes Challenge Course. As a result, a larger group of students from Ruland will participate in outdoor experiences in the fall.

Implications: The Ropes Challenge Course Experience and others like it may prove to establish and develop interpersonal skills among students.

Summarized by: Donna Vaughters, CCLD Research Committee

Title: Lifeskills for Stress and the Learning Disabled Student

Researcher: Linda French

School: B. F. Kitchen Elementary School
Loveland, Colorado

Statement of the Problem: Students with learning disabilities often experience increased pressures because of poorer academic performance, processing and interpretation of events around them. They may also experience a higher occurrence of family and personal problems which result in low self-esteem and poor social skills.

Objective: When students with learning disabilities are instructed in recognizing stressors, learn new responses, and are given opportunities to apply new skills, improvement will occur in students' attitudes about school, grades, social appropriateness, and feeling of control over their lives.

Population: Seven 5th-grade students with learning and language disabilities who also demonstrated characteristics of stress described above were selected. Parent permission for participation was secured.

Procedure: Pretests and surveys were given to students, parents and teachers. Students were instructed in seven areas of lifeskills. Two field trips were taken, three speakers presented to the class, and various hands-on activities were part of the instruction. The textbook used was Fighting Invisible Tigers. Students planned and presented projects in one of the seven instructional areas.

Evaluation: Evaluations included a teacher survey on student performance and attitude, student grades, a student survey on attitude toward school, student ability to name stressors, student ability to name stress reducers, student self-assessment of frustration level, the Nowicki-Strickland Internal-External Control Scale, and informal comments about the students. The same evaluations used in pretesting were administered. Nearly all students showed improvement with most evaluation instruments. Researchers report that the most positive results were shown in students' inner control of life situations. Students continued to feel frustrated about their lives, yet were more communicative and realistic of their problems. They were able to name more techniques for reducing stress. Student attitudes toward school, especially toward teachers, improved. Through observation, teachers reported more compliments, cooperation, eye contact, volunteering and cheerfulness. Grades did not improve.

Implications: This research has implications about the needs of students with learning disabilities. Further research could investigate differences in student attitude and in teacher perception. The question remains as to what could be added to the interventions to improve student achievement as reflected in grades.

References:

Hipp, Earl. Fighting Invisible Tigers - A Student Guide to "Life in the Jungle." Free Spirit Publishing, Minneapolis, MN, 1986.

Schmitz, Connie. A Teacher's Guide to Fighting Invisible Tigers: A Twelve Part Course in Life Skills Development.

Summarized by: Dennis Hamann, CCLD Research Committee

Title: Using the Computer to Meet Specific Writing Needs of Learning Disabled Students

Researcher: Deborah Usrey

School: Woodglen Elementary School
Thornton, Colorado

Statement of Problem: Students with learning disabilities often have difficulties with topic development, sentence structure, spelling, language mechanics, handwriting and editing. Many techniques have been developed to improve skills in each of these areas such as pre-writing and proofreading strategies, but few are comprehensive in nature.

Objective: To determine the effect of comprehensive use of the computer on writing quality and the motivation to write.

Population: Ten students in grades 1-5 who were identified as having learning disabilities in written language participated in the study.

Assessment: Pre and post writing measures using the Adams County School District #12 Writing Sample Criteria were gathered. The instrument evaluates organization, sentence structure, mechanics, spelling and formatting using a weighted scale. Informal teacher observations of student progress and attitudes toward writing were logged.

Procedures: Each student's needs were individually assessed. Prescriptive interventions in the areas listed above, along with techniques described in Maria Clay's Reading Recovery Program were used. Most students participated for 4-5 months in the study.

Materials: Computer with word processor and strategies outlined in chapters addressing writing in Reading Strategies and Practices by Maria Clay were used.

Evaluation: Each student was compared to his/her own baseline performance as determined by the initial writing sample.

Findings: The most notable progress was made by a 1st grader who advanced from writing a few letters to writing complete sentences with correct mechanics and spelling. Progress was also noted for older students who gained in awareness and application of skills. The computer was motivating, particularly with proofreading. Editing required teacher assistance and supervision. Not only did the computer assist with targeted skills for improvement, but was effective as an early intervention tool.

Implications: Use of the computer for early intervention, particularly with emergent writers, and for editing activities should be explored further. The addition of a spelling check would have expanded the scope of study.

Summarized by: Nancy Dixon, CCLD Research Committee

Title: Whole Language Versus Basal Reading Instruction for Learning Disabled Students

Researcher: Heidi Gesso

School: Stein Elementary School
Lakewood, Colorado

Statement of the Problem: The study was conducted to investigate whether whole language reading instruction, as claimed by research, is superior to basal reading instruction with high-risk students, such as those with learning disabilities. Three aspects of a whole language approach were targeted for study: a) the "literature component," i.e., instruction and sustained reading with high interest-low reading level books, b) direct instruction and practical experience in "survival" skills using reading as a vehicle, and c) peer tutoring with younger students.

Objective: To compare the reading achievement and attitudes of a control group and an experimental group of 5th and 6th graders with learning disabilities who had received reading instruction from a basal approach (control group) or a whole language approach (experimental group) described above.

Population: Ten students with learning disabilities in grades 5 and 6 were equally divided into a control group and an experimental group.

Assessment: A reading survey and reading achievement subtests (Woodcock-Johnson Achievement Battery) were administered for pre and post test purposes. Informal teacher observations were gathered to assess attitude changes toward reading.

Procedures: Each group met daily in the Resource Room for 50 minutes. The control group received traditional basal reading instruction while the experimental group engaged in whole language activities of the "literature component" (40 percent of total reading time). This consisted of instruction and hands-on experiences in life skill areas with emphasis on shared reading (40 percent) and peer tutoring with 2nd graders using neurologic impress methods with repetitive language books (20 percent). Both groups received basal reading instruction during the first semester. The experimental group also engaged in "survival" skill activities and peer tutoring from the beginning of the year. Activities at second semester for the experimental group included substitution of the basal approach with the literature component and shifts to shared reading and the neurologic impress method described above.

Materials: Repetitive language and beginning reading books used for peer tutoring, two Sprint Libraries of multiple copies, high interest-low difficulty books (Scholastic Inc.).

Evaluation: The following were used to evaluate: achievement testing using the Woodcock-Johnson reading subtests; a reading attitude survey asking if reading was meaning-related versus sound-related as determined by response to the question "What is reading?"; informal teacher observation of sustained reading ability, comprehension, interest, peer interaction and self-esteem as a learner. Measures were gathered at the beginning and ending of the second semester.

Findings: Students showed no measurable group difference in reading growth as a result of instructional approaches. Both advanced approximately 3-6 months in decoding and comprehension skills. However, the experimental group demonstrated a more positive and purposeful attitude toward reading. Teacher observation of experimental group students also noted: lengthier sustained silent reading, improved comprehension and concentration, decreased acting out during reading and greater interest in reading as a result of teacher directed group reading of multiple copies of high interest-low difficulty books. Gains in self concept and behavior were documented by the peer tutoring experience. "Survival" skill reading activities resulted in increased motivation.

Implications: A larger study would be beneficial given the positive results from this pilot study. Limitations of the small number of students involved and instruction of both groups by the same teacher could be corrected.

Summarized by: Nancy Dixon, CCLD Research Committee

CCLD Classroom Teacher Research Grants
1990-1991

Recipients of CCLD Classroom Teacher Research Grants are:

Building Oral Language and Reading Skills
Judy Wilson
Barney Ford Elementary School, Denver, CO

Early Intervention at the First-Grade Level
Alys Wathen
Jewell Elementary School, Aurora, CO

Effectiveness of Using Edu-Kinesthetic Whole Brain Learning Program
Sylvia Caricato, Beth Thatcher, Toni Carter
South Mesa Elementary School, Pueblo, CO

An Integrated Study of Social Studies for Learning and Language Disabled Fifth-Grade Students
Marlene Arnfield, Pat Vogler
Montview Elementary School, Aurora, CO

Matching Reading Instruction to Reading Styles Through Recorded Books
Shirley Bradsby, Janice Wise, Karen DeLario
DeVinny Elementary School, Lakewood, CO

Physical Education with Extras for Raising Self-Esteem
Mary Bowie, Lottie Flater, John O'Shea
Platte Canyon School, Bailey, CO

Power Through Peer Tutoring: Needing to be Needed
Kirsten Scott, Peggy Cooney Eickelman
Northeast Elementary School, Parker, CO

Social Skills Training for LD Students at the Middle School Level
Karen Sliwkowski
Ortega Middle School, Alamosa, CO

Using Tape Recorders with Reluctant LD Writing Students
Jodi Jones
Franklin Elementary School, Littleton, CO

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